

Maine Bridge Management Enhancements

Client Since

Maine DOT

Start Date

January, 2015

Deighton Contact

Jeff Zavitski
Director of Implementation Services
jeff.zavitski@deighton.com
905.665.6605

Client Reference

Jim Foster
Bridge Management Engineer
james.foster@maine.gov
207.624.3267

Project Type

Bridge Management

Completion Date

May, 2015

The State of Maine has been a Deighton client and user of dTIMS software since 1990 when the application was first implemented as a state level pavement management system. The Maine highway network maintained in dTIMS is comprised of approximately 7,600 miles of paved highways and 2,700 bridges.

This project was awarded to Deighton to assist in the adoption of new strategic policies as analysis parameters within their existing dTIMS analysis setup. The policy changes introduced a Customer Service Level (CSL) based corridor analysis to the traditional condition based analysis that Maine DOT used in dTIMS.

As part of this project, Maine DOT wished to incorporate element level bridge data into dTIMS that would include five element groups: Culvert, Deck, Superstructure, Substructure, and Joints. The project included the following tasks:

- Define and load bridge element level table
- Define and load bridge table
- Define transformations for element level data to element group data
- Define key performance indicators: RSL, CSL, SD, bridge condition
- Define analysis variables for bridge deterioration
- Create transition probability deterioration models in dTIMS
- Create transition probability deterioration models in dTIMS
- Define treatment properties for bridges (triggers, costs, resets)
- Run analysis and test parameters
- Set up a Level of Service (LOS) analysis (Bridges)

The project demonstrated the flexibility and robustness of the dTIMS platform, that provides system sustainability to a long-term client. This project did not involve any software coding changes to adopt the new CSL management policies that were being requested by Maine DOT.

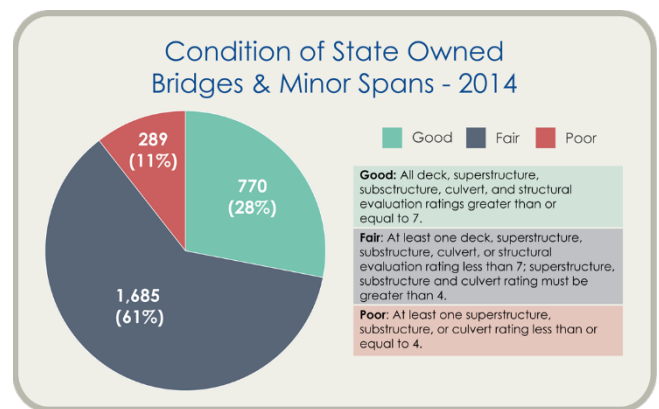


Figure 1: Maine DOT bridge condition shows network in good, fair and poor condition for 2014.

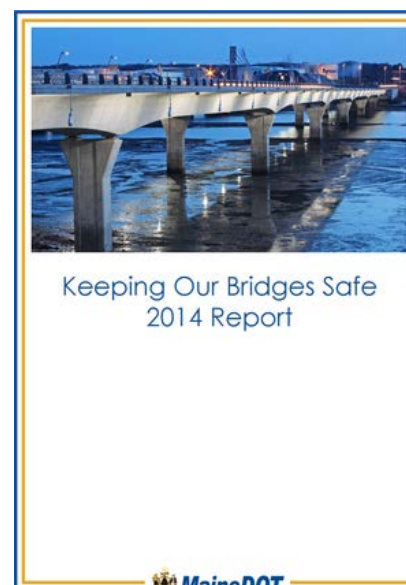


Figure 2: Bridge needs were computed using the Deighton asset management software (dTIMS), as per the 2014 Maine DOT KOBS report.